

5 What we claim is:

1. Separation device (1) for processing biomolecules, especially for isolating nucleic acids, with a separation column (2) that has a top side inlet (7) and a bottom side outlet (8) and in which a separation material (10) is arranged, as well as with a collection vessel (3) for collecting the liquid exiting from the outlet (8), wherein
10 the separation column (2) is inserted into the collection vessel (3) and is closed off with a removable cover (4), wherein the interior of the collection vessel (3) and the separation column (2) have a pressure-equalizing connection (11, 12) in addition to the outlet (8) from the separation column (2).
- 15 2. Separation column according to claim 1, wherein the collection vessel (3) and the separation column (2) are closed or can be closed air- and or liquid-tight by means of the cover (4).
- 20 3. Separation device according to claim 1, wherein the cover (4) is or can be screwed on or positioned on the collection vessel (3).
- 25 4. Separation device according to claim 3, wherein the cover (4) is designed to be hat-like and is or can be screwed (6) onto the exterior of the collection vessel (3).
- 30 5. Separation device according to one of claim 1, wherein the separation column (2) has an edge flange (5) that is pressed onto the collection vessel (3) by means of the cover (4), forming a seal.
6. Separation device according to claim 5, wherein the edge flange (5) is tip-stretched onto the inlet (7).

- 5 7. Separation device according to claim 6, wherein the edge flange (5) lies on the upper edge of the collection vessel (3).
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8. Separation device according to claim 5, wherein the edge flange (5) is clamped between the cover (4) and the collection vessel (3).
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9. Separation device according to claim 1, wherein the pressure-equalizing connection has a port (12) in the upper region of the separation column (2).
10. Separation device according to claim 1, wherein a pressure-equalizing channel (11) between the separation column (2) and the collection vessel (3) is part of the pressure-equalizing connection.
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11. Separation device according to claim 10, wherein the pressure-equalizing channel (10) is constructed as an annular slot (11).
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12. Separation device according to claim 1, wherein the volume enclosed by the collection vessel (3) beneath the lower end of the outlet (8) of the separation column (2) is at least 1.5 times as large as the free volume of the separation column (2) beneath the inlet of the pressure-equalizing connection (11, 12) in the interior of the separation column (2).
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